AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings,

of claims in the application:

1. (Currently Amended) A training method for a power amplifier pre-distorter formed by a FIR filter structure including:

an individual look-up table for each filter tap, each look-up table representing a discretized polynomial in a variable representing signal amplitude, and

means for selecting, from each filter tap look-up table, a filter coefficient that depends on the amplitude of a corresponding complex signal value to be multiplied by the filter tap, said training method further including the steps of

determining a first estimate of a first look-up table assigned to a first filter tap, assuming a second look-up table assigned to a second filter tap is set to predetermined table values;

determining a second estimate of the second look-up table, assuming the first look-up table is set to the determined first estimate.

2. (Currently Amended) The method of claim 1, including the further step of refining the first estimate, assuming the second look-up table is set to the a latest determined second estimate.

3. (Currently Amended) The method of claim 1, including the further steps of

(a) refining the first estimate, assuming the second look-up table is set to the latest determined second estimate;

(b) refining the second estimate, assuming the first look-up table is set to ~~the~~a latest determined first estimate.

4. (Original) The method of claim 3, including the step of repeating steps (a) and (b) until the first and second estimates have converged.

5. (Currently Amended) The method of claim ~~1~~ 2, wherein the steps of determining the first estimate, determining the second estimate, and refining ~~steps~~ the first estimate involve solving equations having ~~the~~ a same algebraic form.

6. (Currently Amended) A base station including a power amplifier pre-distorter formed by a FIR filter structure including:

an individual look-up table for each filter tap, each look-up table representing a discretized polynomial in a variable representing signal amplitude~~;~~; and

means for selecting, from each filter tap look-up table, a filter coefficient that depends on the amplitude of a corresponding complex signal value to be

multiplied by the filter tap, wherein said base station further includes a pre-distorter trainer including:

means for determining a first estimate of a first look-up table assigned to a first filter tap, assuming a second look-up table assigned to a second filter tap is set to predetermined table values;

means for determining a second estimate of the second look-up table, assuming the first look-up table is set to the determined first estimate.

7. (Currently Amended) The base station of claim 6, wherein said trainer includes means for refining the first estimate, assuming the second look-up table is set to ~~the~~a latest determined second estimate.

8. (Original) The base station of claim 6, wherein said trainer includes means for

(a) refining the first estimate, assuming the second look-up table is set to the latest determined second estimate;

(b) refining the second estimate, assuming the first look-up table is set to the latest determined first estimate.

9. (Original) The base station of claim 8, wherein said trainer includes means for repeating steps (a) and (b) until the first and second estimates have converged.

10. (New) The method of claim 3, wherein the steps of determining the first estimate, determining the second estimate, refining the first estimate, and refining the second estimate involve solving equations having a same algebraic form.

11. (New) The method of claim 4, wherein the steps of determining the first estimate, determining the second estimate, refining the first estimate, and refining the second estimate involve solving equations having a same algebraic form.